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INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)



Applicant's or agent's file reference PCTP170615A	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/NL 03/00814	International filing date (day/month/year) 19.11.2003	Priority date (day/month/year) 20.11.2002
International Patent Classification (IPC) or both national classification and IPC B29D30/24		
Applicant VMI EPE HOLLAND B.V.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 10.06.2004	Date of completion of this report 09.02.2005
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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/NL 03/00814**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-7 as published

Claims, Numbers

1-19 as published

Drawings, Sheets

1/2-2/2 as published

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: English, which is:

- ☒ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

see separate sheet

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-19
	No: Claims	
Inventive step (IS)	Yes: Claims	1-10
	No: Claims	11-19
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: US 4923554 - A;

D2: JP 10191586 - A (figures and PAJ abstract);

D3: JP 08065929 - A (figures and PAJ abstract).

2. **Claims 1 - 10**

- 2.1 The document **D1** is regarded as being the closest prior art to the subject-matter of claim **1**, and shows (the references in parentheses applying to this document):
" a belt and tread drum, comprising one or more support members (3) arranged at the circumference of the drum, which are provided with a support surface for a tyre component containing metal parts,
- wherein the support members (3) comprise magnet sets having magnets (11) for retaining the tyre component on the support surface by magnetically attracting the metal parts
- wherein the magnet sets comprise holders (10) for the magnets (11),
- wherein the drum at the circumferential side comprises portions (12) that engage over the magnet sets in tangential and axial direction of the drum".
- 2.2 The subject-matter of claim **1** differs from this known **D1** in that:
- said magnet sets are placed from the radial inside in the support members,
The subject-matter of claim **1** is therefore new (Article 33(2) PCT).
- 2.3 The problem to be solved by the present invention may be regarded as to provide_a different manner of inserting the magnet sets into the support members, in order to further reduce the risk that the magnets could separate from the support members in case of a failure of the retaining glue and detachment of the above mentioned portions (12).
- 2.4 This problem is solved by the feature of point 2.2 above, so that the magnet sets abut

against additional retaining portions of the support members, that would prevent the magnets from being projected by the centrifugal force.

- 2.5 The solution to this problem proposed in claim 1 of the present application is neither known from, nor suggested in the prior art and is therefore considered as involving an inventive step according to Article 33(3) PCT.
- 2.6 Claims 2 to 10 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3. Claims 11 - 19

- 3.1 The subject-matter of claim 11 differs from D1 in that:
- confining portions at the outer side of the drum form a unity with the support members, said confining portions confining the magnets and/or the holders in radial outward direction of the drum.
- 3.2 The problem to be solved by the present invention may therefore be regarded as to provide an alternative manner for fixing the magnets to the drum based on specific geometrical shapes (e.g.: wedge-shaped slots) of the support members in order to prevent the magnets from being propelled by centrifugal force.
- 3.3 It is considered that this problem and the corresponding solution according to claim 11, are common in the field of designing machines with rotating parts, e.g. electrical motors and generators: for example the constructional features mentioned at point 3.1 above have already been employed for the same purpose in documents D2 and D3.
- 3.5 It would be obvious to the person skilled in the art, namely when the same result is to be achieved, to apply these features with corresponding effect to a tyre building drum according to document D1, thereby arriving at the solution of claim 11.
Therefore, it is considered that claim 11 does not involve an inventive step in the sense of Article 33(3) PCT.

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International application No. PCT/NL 03/00814

3.6 By applying the same considerations, it is concluded that also claim **17** does not involve an inventive step in the sense of Article 33(3) PCT.

3.7 The features of the dependent claims **12 to 16, 18 and 19** appear to be either disclosed or suggested in the available prior art or are considered as part of the common knowledge of the skilled person.

4. Observations on the international application

4.1 Although claims **11** and **17** have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.

4.2 Independent claim **1** is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document **D1**) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

4.3 In the present case, the following features are known in combination from the document **D1** and belong in the preamble of such a claim:
"a drum, particularly for shaping a belt layer and/or tread layer or another tyre component provided with metal parts into a circumferential whole, comprising one or more support members arranged at the circumference of the drum, which are provided with a support surface for the tyre component, wherein the support members comprise magnet sets having magnets for retaining the tyre component on the support surface by magnetically attracting the metal parts, wherein the magnet sets comprise holders for the magnets, wherein the drum at the circumferential side comprises portions that engage over the magnet sets in tangential and/or axial direction of the drum".